BIOMARIN PHARMACEUTICAL INC
Form S-3/A
July 05, 2002

As filed with the Securities and Exchange Commission on July 5, 2002
Registration No. 333-86996

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SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

AMENDMENT NO. 1 TO
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

BioMarin Pharmaceutical Inc.
(Exact name of registrant as specified in its charter)

Delaware	68-0397820
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

371 Bel Marin Keys Boulevard, Suite 210
Novato, California 94949
(415) 884-6700

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Fredric D. Price
Chief Executive Officer
BioMarin Pharmaceutical Inc.
371 Bel Marin Keys Boulevard, Suite 210
Novato, California 94949
(415) 884-6700
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to:
Siobhan McBreen Burke
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Los Angeles, California 90071-2371
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Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. |_|

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. |X|

If this form is filed to register additional securities for an offering

pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. |_|

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. |_|

If delivery of the prospectus is expected to be made pursuant to Rule 434 under the Securities Act, please check the following box. |_|

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.

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PRELIMINARY PROSPECTUS
SUBJECT TO COMPLETION

[BIOMARIN
PHARMACEUTICAL
LOGO]

300,000 Shares of Common Stock
par value $.001

BioMarin Pharmaceutical Inc.

This prospectus relates to an aggregate of 300,000 shares of common stock of BioMarin Pharmaceutical Inc. that may be offered for sale by a selling stockholder. We have registered the aggregate number of shares under the Securities Act of 1933 on behalf of this stockholder so that he can sell them in a public offering or other distribution.

Our common stock currently trades on the Nasdaq National Market and the Swiss SWX New Market under the symbol "BMRN."

See "Risk Factors" beginning on page 3 to read about risks that you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is July 5, 2002

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SUMMARY

This prospectus contains forward looking statements which involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward looking statements as a result of certain factors appearing under "Risk Factors" and elsewhere in this prospectus.

The following summary does not contain all the information that may be important to you. You should read the entire prospectus, including the financial statements and other information incorporated by reference in this prospectus, before making an investment decision.

We develop enzyme-based therapeutic products to treat serious, life-threatening diseases and conditions. We leverage our expertise in enzyme biology to develop product candidates for the treatment of genetic diseases, including MPS, MPS VI and PKU, as well as other care situations such as cardiovascular surgery and serious burns. Our product candidates address markets for which no products are currently available or where current products have been associated with major deficiencies. We focus on conditions with well-defined patient populations, including genetic diseases, which require long term, on-going treatment.

Our lead product candidate, Aldurazyme(TM), is being developed for the treatment of Mucopolysaccharidosis I (MPS I) disease. MPS I is a debilitating and life-threatening genetic disease caused by the deficiency of (alpha)-L-iduronidase, an enzyme responsible for breaking down certain carbohydrates. MPS I is a progressive disease that afflicts patients from birth and frequently leads to severe disability and early death. There are currently no drugs on the market for the treatment of MPS I. Aldurazyme has received both fast track designation from the United States Food and Drug Administration (FDA) and orphan drug designation for the treatment of MPS I in the United States and in the European Union. The impact of these designations is described in our Annual Report on Form 10-K, which is incorporated by reference in this prospectus.

We are developing Aldurazyme through a joint venture with Genzyme Corporation. Generally, the FDA requires three types of clinical trials, which we refer to as Phase 1, Phase 2 and Phase 3, prior to the submission of an application to commercially market a drug product. In collaboration with Genzyme, we completed a placebo-controlled Phase 3 clinical trial of Aldurazyme in August 2001. A placebo-controlled study involves collecting data both from patients receiving treatment of the tested substance and patients receiving an inactive substance and comparing the results. By contrast, an open-label study involves only collecting data from patients who know they are receiving treatment of the tested substance. On June 24, 2002, we announced detailed results from this placebo-controlled trial and the preliminary six-month findings from the open-label extension of this trial.

Our joint venture submitted a Marketing Authorization Application (MAA) to the European Medicines Evaluation Agency (or EMEA) on March 1, 2002. The EMEA has accepted our MAA and validated that it is complete and ready for scientific review. Accordingly, the EMEA's Committee for Proprietary Medicinal Products (CPMP) will now evaluate the application to determine whether to approve Aldurazyme for the treatment of MPS I in all 15 member states of the European Union. Norway and Iceland also participate in the CPMP but have a separate approval process.

On April 15, 2002, Genzyme and we announced that the joint venture filed the first portion of a "rolling" Biologics License Application (BLA) with the FDA for approval to market Aldurazyme in the United States. A rolling BLA is an application process that allows us to submit the information required by the BLA in sections. We plan to complete the BLA filing in the third quarter of this year. The complete BLA will include six months of data from the ongoing open-label Phase 3 extension study in addition to the six-month data from the placebo-controlled portion of the Phase 3 trial. Genzyme and we anticipate a response from the FDA regarding the application to market Aldurazyme in the United States during the first half of 2003.

We are developing our second product candidate, Neutralase(TM), for reversal of anticoagulation by heparin in patients undergoing Coronary Artery Bypass Graft, or CABG, surgery and angioplasty. We acquired rights to Neutralase through our acquisition of the pharmaceutical assets of IBEX Technologies Inc. in the fourth quarter of 2001. Heparin is a carbohydrate drug commonly used to prevent coagulation, or blood clotting, during certain types of major surgery. Neutralase is a carbohydrate-modifying enzyme that cleaves heparin, allowing coagulation of blood and aiding patient recovery following CABG surgery and angioplasty. Based on data from previous trials, we plan to initiate a Phase 3 trial in CABG surgery in the third quarter of 2002.

In addition to Aldurazyme and Neutralase, we are developing other enzyme-based therapeutics for the treatment of a variety of diseases and conditions. In 2001, we announced results from a Phase 1 trial of Aryplase(TM) (formerly referred to as rhASB) for the treatment of MPS VI, another seriously debilitating genetic disease. Based on data from this previous trial, we initiated a Phase 2 trial of Aryplase in March of 2002. The primary objective of this open-label, multi-national Phase 2 clinical trial will be to evaluate the efficacy, safety and pharmacokinetics of weekly intravenous infusions of Aryplase in 10 MPS VI patients.

We are also developing Vibrilase(TM) (formerly referred to as Vibriolysin Topical), a topical enzyme product for use in removing burned skin tissue in preparation for skin grafting or other therapy. We initiated a Phase 1 clinical trial of Vibrilase in the United Kingdom in the fourth quarter of 2001, and

expect to begin a Phase 2 clinical trial in either the United States or the United Kingdom following the completion of this Phase 1 trial. In addition, we are pursuing preclinical development of other enzyme product candidates for genetic and other diseases.

Recent Developments

On March 21, 2002, we acquired Synapse Technologies Inc. Synapse owns the rights to certain patented and proprietary technology which, based on the results of preclinical trials, has the potential to deliver therapeutic enzymes and other drugs across the blood-brain barrier by means of traditional intravenous injections. Under the terms of the agreement, we purchased 100% of the outstanding shares of Synapse for approximately $10.2 million payable in 885,240 shares of our common stock. We also may make future contingent payments of up to approximately $6 million. These payments are payable in cash or stock, at our option.

On February 7, 2002, we announced that we had reached a definitive agreement to acquire all of the outstanding capital stock of Glyko Biomedical Ltd. (GBL). GBL's principal asset is its 21.3% ownership interest in our common stock. GBL owns approximately 11.4 million shares of our common stock. Under the terms of the acquisition agreement, GBL's common shareholders will receive approximately 11.4 million shares of our common stock in exchange for all of GBL's outstanding common stock. There will be no net effect on the number of shares of our common stock outstanding, as we plan to retire the existing shares of our common stock currently held by GBL upon closing.

In December 2001 we decided to close the analytics product catalog business of our wholly-owned subsidiary, Glyko, Inc. The majority of the Glyko, Inc. employees will be incorporated into our pharmaceutical business and will continue to provide necessary analytic and diagnostic support to our therapeutic products. Certain operating assets of Glyko, Inc. may be offered for sale.

Our principal executive offices are located at 371 Bel Marin Keys Boulevard, Suite 210, Novato, CA 94949 and our telephone number is (415) 884-6700. "BioMarin," "Aryplase," "Neutralase" and "Vibrilase" are our trademarks. All other trademarks or trade names referred to in this prospectus are the property of their respective owners. Information contained in our website, www.biomarinpharm.com, is not part of this prospectus.

RISK FACTORS

An investment in our common stock involves a high degree of risk. We operate in a dynamic and rapidly changing industry that involves numerous risks and uncertainties. Before purchasing these securities, you should carefully consider the following risk factors, as well as other information contained in this prospectus or incorporated by reference into this prospectus, to evaluate an investment in the securities offered by this prospectus. The risks and uncertainties described below are not the only ones we face. Other risks and uncertainties, including those that we do not currently consider material, may impair our business. If any of the risks discussed below actually occur, our business, financial condition, operating results or cash flows could be materially adversely affected. This could cause the trading price of our common stock to decline, and you may lose all or part of your investment.

If we continue to incur operating losses for a period longer than anticipated, we may be unable to continue our operations at planned levels and may be forced to reduce or discontinue operations.

We are in an early stage of development and have operated at a net loss since we were formed. Since we began operations in March 1997, we have been engaged primarily in research and development. We have no sales revenues from any of our product candidates. As of March 31, 2002, we had an accumulated deficit of approximately $174.7 million. We expect to continue to operate at a net loss for the foreseeable future. Our future profitability depends on our receiving regulatory approval of our product candidates and our ability to successfully manufacture and market any approved drugs, either by ourselves or jointly with others. The extent of our future losses and the timing of profitability are highly uncertain. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations.

If we fail to obtain the capital necessary to fund our operations, we will be unable to complete our product development programs.

In the future, we may need to raise substantial additional capital to fund operations. We may be unable to raise additional financing when needed due to a variety of factors, including our financial condition, the status of our product programs, and the general condition of the financial markets. If we fail to raise additional financing as we need it, we will have to delay or terminate some or all of our product development programs.

We expect to continue to spend substantial amounts of capital for our operations for the foreseeable future. The amount of capital we will need depends on many factors, including:

- the progress, timing and scope of our preclinical studies and clinical trials;
- the time and cost necessary to obtain regulatory approvals;
- the time and cost necessary to develop commercial manufacturing processes, including quality systems and to build or acquire manufacturing capabilities;
- the time and cost necessary to respond to technological and market developments; and
- any changes made or new developments in our existing collaborative, licensing and other commercial relationships or any new collaborative, licensing and other commercial relationships that we may establish.

Moreover, our fixed expenses such as rent, license payments and other contractual commitments are substantial and will increase in the future. These fixed expenses will increase because we may enter into:

- additional leases for new facilities and capital equipment;
- additional licenses and collaborative agreements;
- additional contracts for consulting, maintenance and administrative services; and
- additional contracts for product manufacturing.

We believe that our cash, cash equivalents and short term investment securities balances at March 31, 2002 will be sufficient to meet our operating and capital requirements through 2003. These estimates are based on assumptions and estimates, which may prove to be wrong. As a result, we may need or choose to obtain additional financing during that time.

If we fail to obtain regulatory approval to commercially manufacture or sell any of our future drug products, or if approval is delayed, we will be unable to generate revenue from the sale of our products, our potential for generating positive cash flow will be diminished and the capital necessary to fund our operations will increase.

We must obtain regulatory approval before marketing or selling our drug products in the U.S. and in foreign jurisdictions. In the United States, we must obtain FDA approval for each drug that we intend to commercialize. The FDA approval process is typically lengthy and expensive, and approval is never certain. Products distributed abroad are also subject to foreign government regulation. None of our drug products has received regulatory approval to be commercially marketed and sold. If we fail to obtain regulatory approval, we will be unable to market and sell our drug products. Because of the risks and uncertainties in biopharmaceutical development, our drug products could take a significantly longer time to gain regulatory approval than we expect or may never gain approval. If regulatory approvals are not obtained or are delayed, the credibility of our management and the value of our company will be adversely affected. Additionally, we will be unable to generate revenue from the sale of our products and our potential for generating positive cash flow will be diminished and the capital necessary to fund our operations will be increased.

To obtain regulatory approval to market our products, preclinical studies and costly and lengthy clinical trials will be required, and the results of the studies and trials are highly uncertain.

As part of the regulatory approval process, we must conduct, at our own expense, preclinical studies in the laboratory on animals and clinical trials on humans for each drug product. We expect the number of preclinical studies and clinical trials that the regulatory authorities will require will vary depending on the drug product, the disease or condition the drug is being developed to address and regulations applicable to the particular drug. We may need to perform multiple preclinical studies using various doses and formulations before we can begin clinical trials, which could result in delays in our ability to market any of our drug products. Furthermore, even if we obtain favorable results in preclinical studies on animals, the results in humans may be significantly different.

After we have conducted preclinical studies on animals, we must demonstrate that our drug products are safe and efficacious for use on the target human patients in order to receive regulatory approval for commercial sale. Adverse or inconclusive clinical results would stop us from filing for regulatory approval of our drug products. Additional factors that can cause delay or termination of our clinical trials include:

- slow or insufficient patient enrollment;
- slow recruitment of, and completion of necessary institutional approvals at clinical sites;
- longer treatment time required to demonstrate efficacy;
- lack of sufficient supplies of the product candidate;
- adverse medical events or side effects in treated patients;

- lack of effectiveness of the product candidate being tested; and

- regulatory requests for additional clinical trials.

Typically, if a drug product is intended to treat a chronic disease, as is the case with most of the product candidates we are developing, safety and efficacy data must be gathered over an extended period of time, which can range from six months to three years or more.

In May 2001, we completed a 24-month patient evaluation for the initial clinical trial of our lead drug product, Aldurazyme, for the treatment of MPS I. Two of the original ten patients enrolled in this trial died in 2000. One of these patients received 103 weeks of Aldurazyme treatment and the other received 137 weeks of treatment. One of the original forty-five patients who completed the Phase 3 clinical trial died after 16 weeks of the Phase 3 extension study. One patient treated under a single-patient use protocol died after 31 weeks of Aldurazyme treatment. Based on medical data collected from clinical investigative sites, none of these cases directly implicated treatment with Aldurazyme as the cause of death. If cases of patient complications or death are ultimately attributed to Aldurazyme, our chances of commercializing this drug would be seriously compromised.

The fast track designation for our product candidates may not actually lead to a faster review process and a delay in the review process or approval of our products will delay revenue from the sale of the products and will increase the capital necessary to fund these programs.

Aldurazyme and Aryplase have obtained fast track designations, which provides certain advantageous procedures and guidelines with respect to the review by the FDA of the BLA for these products and which may result in our receipt of an initial response from the FDA earlier than would be received if these products had not received a fast track designation. However, these procedures and guidelines do not guarantee that the total review process will be shorter than, or that approval will be obtained, if at all, earlier than, would be the case if the products had not received fast track designation. If the review process or approval for either product is delayed, realizing revenue from the sale of these products will be delayed and the capital necessary to fund these programs will be increased.

We will not be able to sell our drug products if we fail to comply with manufacturing regulations.

Before we can begin commercial manufacture of our drug products, we must obtain regulatory approval of our manufacturing facility and process. In addition, manufacture of our drug products must comply with the FDA's current Good Manufacturing Practices regulations, commonly known as cGMP. The cGMP regulations govern quality control and documentation policies and procedures. Our manufacturing facilities are continuously subject to inspection by the FDA, the State of California and foreign regulatory authorities, before and after product approval. Our Galli Drive and our Bel Marin Keys Boulevard manufacturing facilities have been inspected and licensed by the State of California for clinical pharmaceutical manufacture. Due to the complexity of the processes used to manufacture our products, we may be unable to pass federal or international regulatory inspections in a cost effective manner. For the same reason, any potential third party manufacturer of our drug products may be unable to comply with cGMP regulations in a cost effective manner.

We must pass federal, state and European regulatory inspections, and we

must manufacture process qualification batches to final specifications under cGMP controls for each of our drug products before the marketing applications can be approved. Although we have completed process qualification batches for Aldurazyme, these batches may be rejected by the regulatory authorities, and we may be unable to manufacture the process qualification batches for our other products or pass the inspections in a timely manner, if at all.

If we fail to obtain orphan drug exclusivity for some of our products, our competitors may sell products to treat the same conditions and our revenues will be reduced.

As part of our business strategy, we intend to develop some drugs that may be eligible for FDA and European Community orphan drug designation. Under the Orphan Drug Act, the FDA may designate a product as an orphan drug if it is a drug intended to treat a rare disease or condition, defined as a patient population of less than 200,000 in the United States. The company that first obtains FDA approval for a designated orphan drug for a given rare disease receives marketing exclusivity for use of that drug for the stated condition for a period of seven years. However, different drugs can be approved for the same condition. Similar regulations are available in the European Community with a ten year period of market exclusivity.

Because the extent and scope of patent protection for our drug products is limited, orphan drug designation is particularly important for our products that are eligible for orphan drug designation. We plan to rely on the exclusivity period under the orphan drug designation to maintain a competitive position. If we do not obtain orphan drug exclusivity for our drug products, which do not have patent protection, our competitors may then sell the same drug to treat the same condition.

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Even though we have obtained orphan drug designation for certain of our product candidates and even if we obtain orphan drug designation for other products we develop, due to the uncertainties associated with developing pharmaceutical products, we may not be the first to obtain marketing approval for any orphan indication or, if we are the first, that exclusivity would effectively protect the product from competition. Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process.

Because the target patient populations for some of our products are small, we must achieve significant market share and obtain high per-patient prices for our products to achieve profitability.

Two of our lead drug candidates, Aldurazyme and Aryplase, target diseases with small patient populations. As a result, our per-patient prices must be relatively high in order to recover our development costs and achieve profitability. Aldurazyme targets patients with MPS I and Aryplase targets patients with MPS VI. We estimate that there are approximately 3,400 patients with MPS I and 1,100 patients with MPS VI in the developed world. We believe that we will need to market worldwide to achieve significant market share. In addition, we are developing other drug candidates to treat conditions, such as other genetic diseases and serious burn wounds, with small patient populations. Due to the expected costs of treatment for Aldurazyme and Aryplase, we may be unable to obtain sufficient market share for our drug products at a price high enough to achieve profitability.

If we fail to obtain an adequate level of reimbursement for our drug products by third-party payers, the sales of our drugs would be adversely affected or there may be no commercially viable market for our products.

The course of treatment for patients with MPS I using Aldurazyme and for patients with MPS VI using Aryplase is expected to be expensive. We expect patients to need treatment throughout their lifetimes. We expect that most families of patients will not be capable of paying for this treatment themselves. There will be no commercially viable market for Aldurazyme or Aryplase without reimbursement from third-party payers. Additionally, even if there is a commercially viable market, if the level of reimbursement is below our expectations, our revenues and gross margins will be adversely affected.

Third-party payers, such as government or private health care insurers, carefully review and increasingly challenge the prices charged for drugs. Reimbursement rates from private companies vary depending on the third-party payer, the insurance plan and other factors. Reimbursement systems in international markets vary significantly by country and by region, and reimbursement approvals must be obtained on a country-by-country basis.

We currently have no expertise obtaining reimbursement. We expect to rely on the expertise of our joint venture partner Genzyme to obtain reimbursement for the costs of Aldurazyme. In addition, we will need to develop our own reimbursement expertise for future drug candidates unless we enter into collaborations with other companies with the necessary expertise. We will not know what the reimbursement rates will be until we are ready to market the product and we actually negotiate the rates. If we are unable to obtain sufficiently high reimbursement rates, our products may not be commercially viable or our future revenues and gross margins may be adversely affected.

We expect that, in the future, reimbursement will be increasingly restricted both in the United States and internationally. The escalating cost of health care has led to increased pressure on the health care industry to reduce costs. Governmental and private third-party payers have proposed health care reforms and cost reductions. A number of federal and state proposals to control the cost of health care, including the cost of drug treatments, have been made in the United States. In some foreign markets, the government controls the pricing which would affect the profitability of drugs. Current government regulations and possible future legislation regarding health care may adversely affect reimbursement for medical treatment by third-party payers, which may render our products not commercially viable or may adversely affect our future revenues and gross margins.

If we are unable to protect our proprietary technology, we may not be able to compete as effectively.

Where appropriate, we seek patent protection for certain aspects of our technology. Patent protection may not be available for some of the enzymes we are developing. If we must spend significant time and money protecting our patents, designing around patents held by others or licensing, for large fees, patents or other proprietary rights held by others, our business and financial prospects may be harmed.

The patent positions of biotechnology products are complex and uncertain. The scope and extent of patent protection for some of our products are particularly uncertain because key information on some of the enzymes we are developing has existed in the public domain for many years. Other parties have published the structure of the enzymes, the methods for purifying or producing the enzymes or the methods of treatment. The composition and genetic sequences of animal and/or human versions of many of our enzymes have been published and are believed to be in the public domain. The composition and genetic sequences of other MPS enzymes that we intend to develop as products have also been

published. Publication of this information may prevent us from obtaining composition-of-matter patents, which are generally believed to offer the strongest patent protection. For enzymes with no prospect of broad composition-of-matter patents, other forms of patent protection or orphan drug status may provide us with a competitive advantage. As a result of these uncertainties, investors should not rely on patents as a means of protecting our product candidates, including Aldurazyme.

We own or license patents and patent applications to certain of our product candidates. However, these patents and patent applications do not ensure the protection of our intellectual property for a number of other reasons, including the following:

- We do not know whether our patent applications will result in issued patents. For example, we may not have developed a method for treating a disease before others developed similar methods.

- Competitors may interfere with our patent process in a variety of ways. Competitors may claim that they invented the claimed invention prior to us. Competitors may also claim that we are infringing on their patents and therefore cannot practice our technology as claimed under our patent. Competitors may also contest our patents by showing the patent examiner that the invention was not original, was not novel or was obvious. In litigation, a competitor could claim that our issued patents are not valid for a number of reasons. If a court agrees, we would lose that patent. As a company, we have no meaningful experience with competitors interfering with our patents or patent applications.

- Enforcing patents is expensive and may absorb significant time of our management. Management would spend less time and resources on developing products, which could increase our research and development expense and delay product programs.

- Receipt of a patent may not provide much practical protection. If we receive a patent with a narrow scope, then it will be easier for competitors to design products that do not infringe on our patent.

In addition, competitors also seek patent protection for their technology. Due to the number of patents in our field of technology, we cannot be assured that we do not infringe on those patents or that we will not infringe on patents granted in the future. If a patent holder believes our product infringes on their patent, the patent holder may sue us even if we have received patent protection for our technology. If someone else claims we infringe on their technology, we would face a number of issues, including the following:

- Defending a lawsuit takes significant time and can be very expensive.

- If the court decides that our product infringes on the competitor's patent, we may have to pay substantial damages for past infringement.

- The court may prohibit us from selling or licensing the product unless the patent holder licenses the patent to us. The patent holder is not required to grant us a license. If a license is available, we may have to pay substantial royalties or grant cross-licenses to our patents.

- Redesigning our product so it does not infringe may not be possible or could require substantial funds and time.

It is also unclear whether our trade secrets will provide useful

protection. While we use reasonable efforts to protect our trade secrets, our employees or consultants may unintentionally or willfully disclose our information to competitors. Enforcing a claim that someone else illegally obtained and is using our trade secrets, like patent litigation, is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. Our competitors may independently develop equivalent knowledge, methods and know-how.

We may also support and collaborate in research conducted by government organizations or by universities. These government organizations and universities may be unwilling to grant us any exclusive rights to technology or products derived from these collaborations prior to entering into the relationship. If we do not obtain required licenses or rights, we could encounter delays in product development while we attempt to design around other patents or even be prohibited from developing, manufacturing or selling products requiring these licenses. There is also a risk that disputes may arise as to the rights to technology or products developed in collaboration with other parties.

The United States Patent and Trademark Office recently issued two patents that relate to (alpha)-L-iduronidase. If we are not able to successfully challenge these patents, we may be prevented from producing Aldurazyme unless and until we obtain a license.

The United States Patent and Trademark Office recently issued two patents that include composition of matter and method of use claims for recombinant (alpha)-L-iduronidase. Our lead drug product, Aldurazyme, is based on recombinant (alpha)-L-iduronidase. We believe that these patents are invalid on a number of grounds. A corresponding patent application was filed in the European Patent Office claiming composition of matter for recombinant (alpha)-L-iduronidase, and it was rejected over prior art and withdrawn and cannot be refiled. Nonetheless, under U.S. law, issued patents are entitled to a presumption of validity, and our challenges to the U.S. patents may be unsuccessful. Even if we are successful, challenging the U.S. patents may be expensive, require our management to devote significant time to this effort and may delay commercialization of Aldurazyme in the United States.

The patent holder has granted an exclusive license for products relating to these patents to one of our competitors. If we are unable to successfully challenge the patents, we may be unable to produce Aldurazyme in the United States unless we can obtain a sublicense from the current licensee. The current licensee is not required to grant us a license and even if a license is available, we may have to pay substantial license fees, which could materially reduce potential profits from the eventual sale of Aldurazyme.

If our joint venture with Genzyme were terminated, we could be barred from commercializing Aldurazyme or our ability to commercialize Aldurazyme would be delayed or diminished.

We are relying on Genzyme to apply the expertise it has developed through the launch and sale of other enzyme-based products to the marketing of our initial drug product, Aldurazyme. We have no experience selling, marketing or obtaining reimbursement for pharmaceutical products. In addition, without Genzyme, we would be required to pursue foreign regulatory approvals. We have no experience in seeking foreign regulatory approvals.

Either Genzyme or we may terminate the joint venture for specified reasons, including if the other party is in material breach of the agreement or has experienced a change of control or has declared bankruptcy and also is in breach of the agreement. Although we are not currently in breach of the joint venture agreement and we believe that Genzyme is not currently in breach of the joint venture agreement, there is a risk that either Genzyme or we could breach the

agreement in the future. Either party may also terminate the agreement upon one-year prior written notice for any reason. Furthermore, we may terminate the joint venture if Genzyme fails to fulfill its contractual obligation to pay us $12.1 million in cash upon the approval of the BLA for Aldurazyme.

If the joint venture is terminated for breach, the non-breaching party would be granted, exclusively, all of the rights to Aldurazyme and any related intellectual property and regulatory approvals and would be obligated to buy out the breaching party's interest in the joint venture. If we are the breaching party, we would lose our rights to Aldurazyme and the related intellectual property and regulatory approvals. If the joint venture is terminated without cause, the non-terminating party would have the option, exercisable for one year, to buy out the terminating party's interest in the joint venture and obtain all rights to Aldurazyme exclusively. In the event of termination of the buy out option without exercise by the non-terminating party as described above, all right and title to Aldurazyme is to be sold to the highest bidder, with the proceeds to be split equally between Genzyme and us.

If the joint venture is terminated by either party because the other declared bankruptcy and is also in breach of the agreement, the terminating party would be obligated to buy out the other and would obtain all rights to Aldurazyme exclusively. If the joint venture is terminated by a party because the other party experienced a change of control, the terminating party shall notify the other party, the offeree, of its intent to buy out the offeree's interest in the joint venture for a stated amount set by the terminating party at its discretion. The offeree must then either accept this offer or agree to buy the terminating party's interest in the joint venture on those same terms. The party who buys out the other would then have exclusive rights to Aldurazyme.

If we were obligated, or given the option, to buy out Genzyme's interest in the joint venture, and gain exclusive rights to Aldurazyme, we may not have sufficient funds to do so and we may not be able to obtain the financing to do so. If we fail to buy out Genzyme's interest, we may be held in breach of the agreement and may lose any claim to the rights to Aldurazyme and the related intellectual property and regulatory approvals. We would then effectively be prohibited from developing and commercializing the product.

Termination of the joint venture in which we retain the rights to Aldurazyme could cause us significant delays in product launch in the United States, difficulties in obtaining third-party reimbursement and delays or failure to obtain foreign regulatory approval, any of which could hurt our business and results of operations. Since Genzyme funds 50% of the joint venture's operating expenses, the termination of the joint venture would double our financial burden and reduce the funds available to us for other product programs.

If we are unable to manufacture our drug products in sufficient quantities and at acceptable cost, we may be unable to meet demand for our products and lose potential revenues or have reduced margins.

Although we have successfully manufactured Aldurazyme at commercial scale within our cost parameters, due to the complexity of manufacturing our products we may not be able to manufacture any other drug product successfully with a commercially viable process or at a scale large enough to support their respective commercial markets or at acceptable margins.

Our manufacturing processes may not meet initial expectations and we may encounter problems with any of the following measurements of performance if we attempt to increase the scale or size or improve the commercial viability of our

manufacturing processes:

- design, construction and qualification of manufacturing facilities that meet regulatory requirements;
- schedule;
- reproducibility;
- production yields;
- purity;
- costs;
- quality control and assurance systems;
- shortages of qualified personnel; and
- compliance with regulatory requirements.

Improvements in manufacturing processes typically are very difficult to achieve and are often very expensive and may require extended periods of time to develop. If we contract for manufacturing services with an unproven process, our contractor is subject to the same uncertainties, high standards and regulatory controls.

The availability of suitable contract manufacturing at scheduled or optimum times is not certain. The cost of contract manufacturing is greater than internal manufacturing and therefore our manufacturing processes must be of higher productivity to yield equivalent margins.

The manufacture of Neutralase involves the fermentation of a bacterial species. We have never used a bacterial production process for the production of any commercial product. IBEX Technologies Inc., from which we acquired Neutralase, had contracted with a third party for the manufacture of the Neutralase used in prior clinical trials.

We have built-out approximately 51,800 square feet at our Novato facilities for manufacturing capability for Aldurazyme and Aryplase including related quality control laboratories, materials capabilities, and support areas. We expect to add additional capabilities in stages over time, which could create additional operational complexity and challenges. We expect that the manufacturing process of all of our new drug products, including Aryplase and Neutralase, will require significant time and resources before we can begin to manufacture them (or have them manufactured by third parties) in commercial quantity at acceptable cost.

In order to achieve our product cost targets, we must develop efficient manufacturing processes either by:

- improving the product yield from our current cell lines, colonies of cells which have a common genetic makeup;
- improving the manufacturing processes licensed from others; or
- developing more efficient, lower cost recombinant cell lines and production processes.

A recombinant cell line is a cell line with foreign DNA inserted that is used to produce an enzyme or other protein that it would not have otherwise produced. The development of a stable, high production cell line for any given enzyme is difficult, expensive and unpredictable and may not result in adequate yields. In addition, the development of protein purification processes is difficult and may not produce the high purity required with acceptable yield and costs or may not result in adequate shelf-lives of the final products. If we are not able to develop efficient manufacturing processes, the investment in manufacturing capacity sufficient to satisfy market demand will be much greater and will place heavy financial demands upon us. If we do not achieve our manufacturing cost targets, we will have lower margins and reduced profitability in commercial production and larger losses in manufacturing start-up phases.

If we are unable to expand marketing and distribution capabilities or to enter into agreements with third parties to do so, our ability to generate revenues will be diminished.

If we cannot expand capabilities either by developing our own sales and marketing organization or by entering into agreements with others, we may be unable to successfully sell our products. We believe that developing an internal sales and distribution capability will be expensive and time consuming.

Alternatively, we may enter into agreements with third parties to market our products. For example, under our joint venture with Genzyme, Genzyme is responsible for marketing and distributing Aldurazyme. However, these third parties may not be capable of successfully selling any of our drug products.

With our acquisition of Neutralase from IBEX Technologies Inc., we have an enzyme product that has a significantly larger potential patient population than Aldurazyme and Aryplase and will be marketed and sold to different target audiences with different therapeutic and financial requirements and needs. As a result, we will be competing with other pharmaceutical companies with experienced and well-funded sales and marketing operations targeting these specific physician and institutional audiences. We may not be able to develop our own sales and marketing force at all, or of a size that would allow us to compete with these other companies. If we elect to enter into third-party marketing and distribution agreements in order to sell into these markets, we may not be able to enter into these agreements on acceptable terms, if at all. If we cannot compete effectively in these specific physician and institutional markets, it would adversely affect sales of Neutralase.

If we fail to compete successfully with respect to product sales, we may be unable to generate sufficient sales to recover our expenses related to the development of a product program or to justify continued marketing of a product.

Our competitors may develop, manufacture and market products that are more effective or less expensive than ours. They may also obtain regulatory approvals for their products faster than we can obtain them (including those products with orphan drug designation) or commercialize their products before we do. With respect to Aldurazyme and Aryplase, if our competitors successfully commercialize a product that treats MPS I or MPS VI, respectively, before we do, we may effectively be precluded from developing a product to treat that disease because the patient populations of the diseases are so small. If one of our competitors gets orphan drug exclusivity, we could be precluded from marketing our version for seven years in the U.S. and ten years in the European Union. However, different drugs can be approved for the same condition. If we do not compete successfully, we may be unable to generate sufficient sales to recover our expenses related to the development of a product program or to justify continued marketing of a product.

If we fail to compete successfully with respect to acquisitions, joint venture and other collaboration opportunities, we may be limited in our ability to develop new products and to continue to expand our product pipeline.

Our competitors compete with us to attract organizations for acquisitions, joint ventures, licensing arrangements or other collaborations. To date, several of our product programs have been acquired through acquisitions, such as the programs acquired from IBEX and Synapse, and several of our product programs have been developed through licensing or collaborative arrangements, such as Aldurazyme and Vibrilase. These collaborations include licensing proprietary technology from, and other relationships with, academic research institutions. If our competitors successfully enter into partnering arrangements or license agreements with academic research institutions, we will then be precluded from pursuing those specific opportunities. Since each of these opportunities is unique, we may not be able to find a substitute. Several pharmaceutical and biotechnology companies have already established themselves in the field of enzyme therapeutics, including Genzyme, our joint venture partner. These companies have already begun many drug development programs, some of which may target diseases that we are also targeting, and have already entered into partnering and licensing arrangements with academic research institutions, reducing the pool of available opportunities.

Universities and public and private research institutions are also competitors with us. While these organizations primarily have educational or basic research objectives, they may develop proprietary technology and acquire patents that we may need for the development of our drug products. We will attempt to license this proprietary technology, if available. These licenses may not be available to us on acceptable terms, if at all. If we are unable to compete successfully with respect to acquisitions, joint venture and other collaboration opportunities, we may be limited in our ability to develop new products and to continue to expand our product pipeline.

If we do not achieve our projected development goals in the time frames we announce and expect, the commercialization of our products may be delayed and the credibility of our management may be adversely affected and, as a result, our stock price may decline.

For planning purposes, we estimate the timing of the accomplishment of various scientific, clinical, regulatory and other product development goals, which we sometimes refer to as milestones. These milestones may include the commencement or completion of scientific studies and clinical trials and the submission of regulatory filings. From time to time, we publicly announce the expected timing of some of these milestones. All of these milestones are based on a variety of assumptions. The actual timing of these milestones can vary dramatically compared to our estimates, in many cases for reasons beyond our control. If we do not meet these milestones as publicly announced, the commercialization of our products may be delayed and the credibility of our management may be adversely affected and, as a result, our stock price may decline.

If we fail to manage our growth or fail to recruit and retain personnel, our product development programs may be delayed.

Our rapid growth has strained our managerial, operational, financial and other resources. We expect this growth to continue. We have entered into a joint venture with Genzyme. If we receive FDA and/or foreign government approval to market Aldurazyme, the joint venture will be required to devote additional resources to support the commercialization of Aldurazyme.

To manage expansion effectively, we need to continue to develop and improve our research and development capabilities, manufacturing and quality capacities, sales and marketing capabilities and financial and administrative systems. Our staff, financial resources, systems, procedures or controls may be inadequate to support our operations and our management may be unable to manage successfully future market opportunities or our relationships with customers and other third parties.

Our future growth and success depends on our ability to recruit, retain, manage and motivate our employees. The loss of key scientific, technical and managerial personnel may delay or otherwise harm our product development programs. Any harm to our research and development programs would harm our business and prospects.

Because of the specialized scientific and managerial nature of our business, we rely heavily on our ability to attract and retain qualified scientific, technical and managerial personnel. In particular, the loss of Fredric D. Price, our Chairman and Chief Executive Officer, or Emil D. Kakkis, M.D., Ph.D., our Senior Vice President of Scientific Affairs or Christopher M. Starr, Ph.D., our Senior Vice President for Research and Development, could be detrimental to us if we cannot recruit suitable replacements in a timely manner. While Mr. Price, Dr. Kakkis and Dr. Starr are parties to employment agreements with us, these agreements do not guarantee that they will remain employed with us in the future. In addition, these agreements do not restrict their ability to compete with us after their employment is terminated. The competition for qualified personnel in the biopharmaceutical field is intense. Due to this intense competition, we may be unable to continue to attract and retain qualified personnel necessary for the development of our business.

Changes in methods of treatment of disease could reduce demand for our products.

Even if our drug products are approved, doctors must use treatments that require using those products. If doctors elect a different course of treatment from that which includes our drug products, this decision would reduce demand for our drug products.

Examples include the potential use in the future of effective gene therapy for the treatment of genetic diseases. The use of gene therapy could theoretically reduce or eliminate the use of enzyme replacement therapy in MPS diseases. Sometimes, this change in treatment method can be caused by the introduction of other companies' products or the development of new technologies or surgical procedures which may not directly compete with ours, but which have the effect of changing how doctors decide to treat a disease. For example, Neutralase is being developed for heparin reversal in coronary artery bypass graft (CABG) surgery. It is possible that alternative non-surgical methods of treating heart disease could be developed. If so, then the demand for Neutralase would likely decrease.

If product liability lawsuits are successfully brought against us, we may incur substantial liabilities.

We are exposed to the potential product liability risks inherent in the testing, manufacturing and marketing of human pharmaceuticals. The BioMarin/Genzyme LLC maintains product liability insurance for our clinical trials of Aldurazyme with aggregate loss limits of $5.0 million. We have obtained insurance against product liability lawsuits for the clinical trials for Aryplase and Vibrilase with aggregate loss limits of $8.0 million. Pharmaceutical companies must balance the cost of insurance with the level of coverage based on estimates of potential liability. Historically, the potential liability associated with product liability lawsuits for pharmaceutical products has been unpredictable. Although we believe that our current insurance is a

reasonable estimate of our potential liability and represents a commercially reasonable balancing of the level of coverage as compared to the cost of the insurance, we may be subject to claims in connection with our current clinical trials for Aldurazyme, Aryplase and Vibrilase for which the joint venture's or our insurance coverages are not adequate.

If Aldurazyme, Aryplase or Vibrilase receives FDA approval, the product liability insurance the joint venture or we will need to obtain in connection with the commercial sales of Aldurazyme, Aryplase or Vibrilase may be unavailable in meaningful amounts or at a reasonable cost. In addition, while we take, and continue to take, what we believe are appropriate precautions, we may be unable to avoid significant liability if any product liability lawsuit is brought against us. If we are the subject of a successful product liability claim that exceeds the limits of any insurance coverage we may obtain, we may incur substantial liabilities that would adversely affect our earnings and require the commitment of capital resources that might otherwise be available for the development and commercialization of our product programs.

Our stock price may be volatile, and an investment in our stock could suffer a decline in value.

Our valuation and stock price since the beginning of trading after our initial public offering has had no meaningful relationship to current or historical earnings, asset values, book value or many other criteria based on conventional measures of stock value. The market price of our common stock will fluctuate due to factors including:

- progress of Aldurazyme, Neutralase, Aryplase and our other lead drug products through the regulatory process, especially regulatory actions in the United States related to Aldurazyme;
- results of clinical trials, announcements of technological innovations or new products by us or our competitors;
- government regulatory action affecting our drug products or our competitors' drug products in both the United States and foreign countries;
- developments or disputes concerning patent or proprietary rights;
- general market conditions and fluctuations for the emerging growth and biopharmaceutical market sectors;
- economic conditions in the United States or abroad;
- actual or anticipated fluctuations in our operating results;
- broad market fluctuations in the United States or in Europe, which may cause the market price of our common stock to fluctuate; and
- changes in company assessments or financial estimates by securities analysts.

In addition, the value of our common stock may fluctuate because it is listed on both Nasdaq and the Swiss Exchange's SWX New Market. Listing on both exchanges may increase stock price volatility due to:

- trading in different time zones;

- different ability to buy or sell our stock;
- different market conditions in different capital markets; and
- different trading volume.

In the past, following periods of large price declines in the public market price of a company's securities, securities class action litigation has often been initiated against that company. Litigation of this type could result in substantial costs and diversion of management's attention and resources, which would hurt our business. Any adverse determination in litigation could also subject us to significant liabilities.

If our officers, directors and largest stockholder elect to act together, they may be able to control our management and operations, acting in their best interests and not necessarily those of other stockholders.

Our directors and officers control approximately 24.3% of the outstanding shares of our common stock, based on the number of issued and outstanding shares of our common stock. Glyko Biomedical Ltd. owns approximately 21.3% of the outstanding shares of our common stock. The President and Chief Executive Officer of Glyko Biomedical and a significant shareholder of Glyko Biomedical serve as two of our directors. As a result, due to their concentration of stock ownership, directors and officers, if they act together, may be able to control our management and operations, and may be able to prevail on all matters requiring a stockholder vote including:

- The election of all directors;
- The amendment of charter documents or the approval of a merger, sale of assets or other major corporate transactions; and
- The defeat of any non-negotiated takeover attempt that might otherwise benefit the public stockholders.

Anti-takeover provisions in our charter documents and under Delaware law may make an acquisition of us, which may be beneficial to our stockholders, more difficult.

We are incorporated in Delaware. Certain anti-takeover provisions of Delaware law and our charter documents as currently in effect may make a change in control of our company more difficult, even if a change in control would be beneficial to the stockholders. Our anti-takeover provisions include provisions in the certificate of incorporation providing that stockholders' meetings may only be called by the board of directors and a provision in the bylaws providing that the stockholders may not take action by written consent. Additionally, our board of directors has the authority to issue 1,000,000 shares of preferred stock and to determine the terms of those shares of stock without any further action by the stockholders. The rights of holders of our common stock are subject to the rights of the holders of any preferred stock that may be issued. The issuance of preferred stock could make it more difficult for a third party to acquire a majority of our outstanding voting stock. Delaware law also prohibits corporations from engaging in a business combination with any holders of 15% or more of their capital stock until the holder has held the stock for three years unless, among other possibilities, the board of directors approves the transaction. Our board of directors may use these provisions to prevent changes in the management and control of our company. Also, under applicable Delaware law, our board of directors may adopt additional anti-takeover measures in the future.

The ability of our stockholders to recover against Arthur Andersen LLP, may be limited because we have not been able to obtain, after reasonable efforts, the reissued reports of Arthur Andersen with respect to the financial statements included in this prospectus.

Our consolidated financial statements incorporated by reference into this prospectus have been audited by Arthur Andersen LLP. We have not been able to obtain, after reasonable efforts, the reissued reports of Arthur Andersen with respect to the financial statements included in this registration statement of which this prospectus is a part because, among other reasons, the partner and the audit manager in charge of auditing our company left Arthur Andersen and joined KPMG LLP effective May 9, 2002 and June 11, 2002, respectively. Therefore, in reliance on Rule 437a promulgated under the Securities Act, we have dispensed with the requirement to file with this registration statement and the reissued report and consent of Arthur Andersen with respect to these financial statements. As a result, our stockholders will not be able to recover against Arthur Andersen under Section 11 of the Securities Act for any untrue statement of a material fact contained in these financial statements or any omissions to state a material fact required to be stated therein. In addition, the ability of Arthur Andersen to satisfy any claims properly brought against it may be limited as a practical matter due to recent developments involving Arthur Andersen.

FORWARD LOOKING STATEMENTS

This prospectus contains forward looking statements. These statements relate to future events or our future financial performance. We have identified forward looking statements in this prospectus using words such as "anticipates", "believes," "could," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "should," or "will" or the negative of such terms or other comparable terminology. These statements are based on our beliefs as well as assumptions we made using information currently available to us. Because these statements reflect our current views concerning future events, these statements involve risks, uncertainties, and assumptions. These risks, uncertainties, assumptions and other factors, including the risks outlined under "Risk Factors," that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from future results, levels of actual activity, performance or achievements expressed or implied by such forward looking statements.

Although we believe that the expectations reflected in the forward looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of such statements. We are under no duty to update any of the forward looking statements after the date of this prospectus to conform such statements to actual results, unless required by law.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the shares offered and sold for the account of the selling stockholder. However, the shares were originally purchased by the stockholder with proceeds of a loan from us. Pursuant to the terms of a security agreement securing the stockholder's obligations under this loan, a majority of the proceeds from the sale of these

shares will be used to repay this loan.

The selling stockholder will not pay any of the expenses that are incurred in connection with the registration of the shares, but he will pay all commissions, discounts and any other compensation to any securities broker dealers through whom he sells any of the shares.

SELLING STOCKHOLDER

The following table sets forth the name of the selling stockholder, the aggregate number of shares of common stock beneficially owned by him as of June 28, 2002, and the aggregate number of shares of common stock that he may offer and sell pursuant to this prospectus. Because the selling stockholder may offer all or a portion of the shares of common stock offered by this prospectus at any time and from time to time after the date hereof, no estimate can be made of the number of shares that he may retain upon completion of this offering. However, assuming the selling stockholder sells all of the shares offered by this prospectus, after completion of this offering, the selling stockholder will own approximately 2.0% of the shares of our common stock outstanding.

The shares to be sold in this offering represent a portion of the shares issued to the selling stockholder at the time we were formed. At that time, we loaned the selling stockholder the money to purchase the shares. The selling stockholder was our chairman and chief executive officer from our inception until October of 2000 and a member of our board of directors until May 2002. The majority of the proceeds from the sale of these shares will be used to repay this loan.

In the following table, we have calculated shares of common stock beneficially owned based upon 53,424,129 shares of our common stock outstanding on June 28, 2002, together with options, warrants or other convertible securities that are exercisable, or other rights to acquire common stock, within 60 days of June 28, 2002 by the selling stockholder. Under the rules of the Securities and Exchange Commission, beneficial ownership includes shares over which the named stockholder exercises voting and/or investment power. We believe that the selling stockholder has sole voting and investment power with respect to all shares he beneficially owns, subject to applicable community property laws. The information with respect to beneficial ownership of common stock held by the selling stockholder is based upon information as supplied or confirmed by the selling stockholder.

Name	Number of Shares Beneficially Owned Prior to Offering	Number of Shares Offered Hereby
Grant W. Denison, Jr.....	1,380,697	300,000

PLAN OF DISTRIBUTION

We are registering the shares of common stock offered for sale by this prospectus on behalf of the selling stockholder. As used in this section, "selling stockholder" includes donees, pledgees, distributees, transferees or other successors-in-interest, including, without limitation, their respective affiliates, members and limited or general partners, all of which are referred to as a group below as transferees, or certain counterparties to derivative

transactions with the selling stockholder or transferees. The selling stockholder will act independently of us in making decisions with respect to the timing, manner and size of each sale. We will pay all costs, expenses and fees in connection with the registration of the shares. The selling stockholder will pay all brokerage commissions, underwriting discounts, commissions, transfer taxes and other similar selling expenses, if any, associated with the sale of the shares of common stock by him.

Shares of common stock may be sold by the selling stockholder from time to time in one or more types of transactions (which may include block transactions) on the Nasdaq National Market or on any other market on which our common stock may from time to time be trading, in the over-the-counter market, in privately negotiated transactions, through put or call options transactions relating to the shares, through short sales of such shares, or a combination of such methods of sale, at market prices prevailing at the time of sale, fixed prices, varying prices determined at the time of sale or at negotiated prices. The selling stockholder will have the sole discretion not to accept any purchase offer or make any sale of shares if he deems the purchase price to be unsatisfactory at any particular time. Such transactions may or may not involve brokers or dealers. To the best of our knowledge, the selling stockholder has not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of their securities, nor is there an underwriter or coordinating broker acting in connection with the proposed sale of shares of common stock offered by this prospectus; however, the selling stockholder may enter into agreements, understandings or arrangements with an underwriter or broker-dealer regarding the sale of his shares in the future.

The selling stockholder may effect such transactions by selling shares of common stock directly to purchasers or to or through broker-dealers, which may act as agents or principals, or other agents. Such broker-dealers or other agents may receive compensation in the form of discounts, concessions, or commissions from the selling stockholders and/or the purchasers of shares of common stock for whom such broker-dealers or other agents may act as agents or to whom they sell as principal, or both (which compensation as to a particular broker-dealer or other agent might be in excess of customary commissions). Market makers and block purchasers purchasing the shares will do so for their own account and at their own risk. It is possible that the selling stockholder will attempt to sell shares of common stock in block transactions to market makers or other purchasers at a price per share which may be below the then market price.

The selling stockholder and any brokers, dealers or agents that participate in connection with the sale of shares of common stock might be deemed to be "underwriters" within the meaning of the Securities Act of 1933 (the "Securities Act"), and any commissions received by such brokers, dealers or agents and any profit on the resale of the shares sold by them while acting as principals might be deemed to be underwriting discounts or commissions under the Securities Act. We have agreed to indemnify the selling stockholder against certain liabilities, including liabilities arising under the Securities Act. The selling stockholder may agree to indemnify any agent, dealer, broker-dealer or underwriter that participates in transactions involving sales of the shares of common stock offered pursuant to this prospectus against certain liabilities, including liabilities arising under the Securities Act.

Because the selling stockholder may be deemed to be an "underwriter" within the meaning of the Securities Act, the selling stockholder will be subject to the prospectus delivery requirements of the Securities Act and the rules promulgated thereunder and they may be subject to certain statutory liabilities under the Securities Act, including, but not limited to, Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Securities Exchange Act of 1934 (the "Securities Exchange Act"). In addition, the selling stockholder and any other person participating in the offering will be subject to applicable provisions of the Securities Exchange Act and the rules and regulations thereunder, including

Regulation M under the Securities Exchange Act, which may limit the timing of purchases and sales. These restrictions may affect the marketability of the common stock and the ability of any person to engage in market-making activities with respect to the common stock.

To comply with the securities laws of certain jurisdictions, the shares of common stock offered by this prospectus may need to be offered or sold only through registered or licensed brokers or dealers. In addition, in certain jurisdictions, the shares of common stock may not be offered or sold unless they have been registered or qualified for sale or an exemption is available and complied with.

If the selling stockholder notifies us that any material arrangement has been entered into with a broker-dealer for the sale of shares of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker, dealer or underwriter, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act. In addition, to the extent required, we will amend or supplement this prospectus to disclose other material arrangements regarding the plan of distribution.

LEGAL MATTERS

For the purpose of this offering, Paul, Hastings, Janofsky & Walker LLP, Los Angeles, California is giving an opinion of the validity of the issuance of the securities offered in this prospectus.

EXPERTS

The financial statements for the year ended December 31, 2001, included in our Annual Report on Form 10-K incorporated by reference in this prospectus and elsewhere in the registration statement have been audited by Arthur Andersen LLP, independent public accountants, as indicated in their report with respect thereto. After reasonable efforts, we have not been able to obtain a current consent of Arthur Andersen LLP to the inclusion of these financial statements, and the related report of Arthur Andersen LLP, in this amendment. This inability is because, among other reasons, the partner and the audit manager in charge of auditing us left Arthur Andersen and joined KPMG LLP effective May 9, 2002 and June 11, 2002, respectively. Therefore, in reliance on Rule 437a of the Securities Act, the consent of Arthur Andersen included herein has not been reissued and Arthur Andersen LLP has not consented to the inclusion of its report in this amendment to the registration statement. As a result, our stockholders may not be able to recover against Arthur Andersen LLP under Section 11 of the Securities Act for any untrue statement of a material fact contained in these financial statements or any omissions to state a material fact required to be stated in these financial statements. In addition, the ability of Arthur Andersen LLP to satisfy claims properly brought against it may be limited as a practical matter due to recent developments involving Arthur Andersen LLP.

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's public reference rooms in Washington, D.C. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at

1-800-SEC-0330 for more information about the operation of the public reference rooms. Our SEC filings are also available at the SEC's Web site at "http://www.sec.gov." In addition, you can read and copy our SEC filings at the office of the National Association of Securities Dealers, Inc. at 1735 K Street, Washington, D.C. 20006.

The SEC allows us to "incorporate by reference" information that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. Further, all filings we make under the Securities Exchange Act of 1934 after the date of the initial registration statement and prior to effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus. We incorporate by reference the documents listed below and any future filings we will make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934:

1. Our Annual Report on Form 10-K for the year ended December 31, 2001;

2. Our Definitive Proxy Statement dated July 5, 2002 filed in connection with our 2002 Annual Meeting of Stockholders;

3. Our Current Report of Form 8-K/A filed on January 14, 2002 and our Current Reports on Form 8-K, as filed on January 7, 2002, January 15, 2002; February 7, 2002; February 26, 2002; March 21, 2002; April 16, 2002; April 24, 2002; May 7, 2002; May 16, 2002; June 12, 2002, as amended and restated on June 18, 2002; June 24, 2002 and June 25, 2002 and

4. The description of our common stock set forth in our Form 8A, filed with the SEC on July 15, 1999.

We will provide to you at no cost a copy of any and all of the information incorporated by reference into the registration statement of which this prospectus is a part. You may make a request for copies of this information in writing or by telephone. Requests should be directed to:

BioMarin Pharmaceutical Inc.
Attention: Jeremy Price
371 Bel Marin Keys Boulevard, Suite 210
Novato, CA 94949
(415) 884-6777

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed modified, superceded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus, or in any subsequently filed document that also is deemed to be incorporated by reference in this prospectus, modifies, supercedes or replaces such statement. Any statement so modified, superceded or replaced shall not be deemed, except as so modified, superceded or replaced, to constitute part of this prospectus.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the costs and expenses to be paid by the registrant in connection with the sale of the common stock being registered:

Securities and Exchange Commission registration fee.....	$192
Legal fees and expenses.....	$15,000
Accountants' fees and expenses.....	$2,000
Miscellaneous.....	$1,000
Total.....	$18,192

The foregoing items, except for the Securities and Exchange Commission registration fee, are estimated.

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Reference is made to the Amended and Restated Certificate of Incorporation with the Registrant; the Bylaws of the Registrant; Section 145 of the Delaware General Corporation Law; which, among other things, and subject to certain conditions, authorize the Registrant to indemnify, or indemnify by their terms, as the case may be, the directors and officers of the Registrant against certain liabilities and expenses incurred by such persons in connection with claims made by reason of their being such a director or officer. Pursuant to this authority, the Registrant has entered into an indemnification agreement with each director and executive officer, whereby the Registrant has agreed to cover the indemnification obligations.

The Registrant maintains directors' and officers' insurance providing indemnification against certain liabilities for certain of the Registrant's directors, officers, affiliates, partners or employees.

The indemnification provisions in the Registrant's Bylaws, and the indemnification agreements entered into between the Registrant and its directors and executive officers, may be sufficiently broad to permit indemnification of the Registrant's officers and directors for liabilities arising under the Act.

Reference is made to the following documents incorporated by reference into this Registration Statement regarding relevant indemnification provisions described above and elsewhere herein: (1) the Amended and Restated Certificate of Incorporation, filed as Exhibit 3.1B to Registrant's Amendment No. 2 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on July 6, 1999; (2) the Registrant's Bylaws filed as Exhibit 3.1 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2001, and (3) the form of Indemnification Agreement entered into by the Registrant with each of its directors and executive officers filed as Exhibit 10.1 to Registrant's Registration Statement on Form S-1 filed with the Securities and Exchange Commission on May 4, 1999, each incorporated by reference into this Registration Statement.

ITEM 16. EXHIBITS

Exhibit Number	Description of Document
5.1	Opinion of Paul, Hastings, Janofsky & Walker LLP (Filed Previously).
10.1	Amended and Restated Founder's Stock Purchase Agreement with Grant W. Denison, Jr. dated as of October 1, 1997

	with exhibits. (1)
10.2	Form of Amended and Restated Registration Rights Agreement by and among the Company and the investors named therein. (1)
23.1	Consent of Paul, Hastings, Janofsky & Walker LLP.
23.2**	Consent of Arthur Andersen LLP.
24.1	Power of Attorney (Filed Previously).

** Omitted Pursuant to Rule 437a of the Securities Act
(1) incorporated by reference from the Company's Registration Statement on Form S-1 (Registration No. 333-77701) filed on May 4, 1999.

ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Securities Act of 1933, may be permitted to directors, officers, and controlling persons of the Registrant pursuant to the provisions described in Item 15 or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made pursuant to this registration statement: (i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933; (ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; (iii) to include any material information with respect to the distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed

to be the initial bona fide offering thereof; and

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

The undersigned Registrant undertakes that: (1) for purpose of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of the registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of the registration statement as of the time it was declared effective; and (2) for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Amendment No. 1 to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Novato, State of California, this 5th day of July, 2002.

BIOMARIN PHARMACEUTICAL INC.

By: /s/ Fredric D. Price
Fredric D. Price
Chairman, Chief Executive Officer and
Director (Principal Executive Officer)

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 1 to Registration Statement on Form S-3 has been signed by the following persons in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Fredric D. Price Fredric D. Price	Chairman, Chief Executive Officer and Director (Principal Executive Officer)	July 5, 2002
/s/ Kim Tsuchimoto	Vice President, Controller (Principal Financial	July 5, 2002

----------	and Accounting Officer	
Kim Tsuchimoto		
*	Director	July 5, 2002

Phyllis I. Gardner, M.D.		
*	Director	July 5, 2002

Erich Sager		
*	Director	July 5, 2002

Gwynn R. Williams		

* /s/ Fredric D. Price

By: Fredric D. Price
Attorney-in-Fact

Exhibit Index

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